

BLAIR COUNTY

1731 N. JUNIATA STREET HOLLIDAYSBURG, PA 16648

TEL: 814,696.6280 FAX: 814.696.6240

October 25th, 2023

Brandon Frey, E.I.T.
Western Section
PA DEP Division of Dam Safety
Rachel Carson State Office Building
400 Market Street, 2<sup>nd</sup> Floor
Harrisburg, PA 17101

RE: 2023 Inspection of Ebensburg Storage Dam

DEP File No. 011-061 Project No. 15-0017.102

Dear Mr. Frey:

On behalf of Ebensburg Borough, we herewith submit for your review and approval, two (2) copies of the referenced inspection report.

In summary, the dam appeared to be in good condition. However, the following observations should be noted and addressed by Borough staff:

- Past annual inspection reports had indicated a growing crack present along an upper wall section of the downstream western spillway wall. This wall section had been slowly sliding downhill away from the spillway. In 2019, EMA operational staff removed this section of wall, cutting the remaining concrete flush at the location of the crack. See Photos 13 and 18.
  - a. Three (3) hairline crecks were noted on the lower wall section (see Photo 18) at the location where the upper wall section had previously been removed. The cracks should be monitored moving forward to ensure the lower wall section does not slide in the same way that the upper section did.
- 2. Vegetation on the upstream embankment slope needs cut.
- 3. A wet area was identified on the southern side of the dam access road (see sketch plan). The flow through this wet area was approximately 2-3 GPM, an increase from last year (approximately 1 GPM). The wet area extended to a patch of wetlands adjacent to the Water Treatment Plant Parking Area, it is difficult to determine whether this wet area is a result of dam seepage or runoff from the mountainside to the west of the dam. Regardless, this seep should continue to be monitored for changes moving forward.

If you should have any questions, please contact our office.

Sincerely,

Jonah E. Salyards, P.E.

Project Engineer

OFFICES LOCATED THROUGHOUT PENNSYLVANIA

1.888.696.6280 · 1 - STIFFLER-MCGRAW.COM

STIFFLER MCGRAW & ASSOCIATES, INC | STIFFLER MCGRAW ARCHITECTS, LLC

### Annual Reservoir Inspection

### EBENSBURG STORAGE DAM

DEP ID No. D11-061

Prepared by:



# EBENSBURG BOROUGH, CAMBRIA COUNTY, PENNSYLVANIA

OWNER: EBENSBURG BOROUGH

OCTOBER 2023

#### DAM INSPECTION CHECKLIST

#### **Department of Environmental Protection Bureau of Waterways Engineering Division of Dam Safety**

NAME OF DAM: Ebensburg Storage Dam **DEP DAM NO.: D11-061** 

LOCATION: Municipality: Ebensburg Borough

County: Cambria

DEP CLASSIFICATION DATA: Size: C

Hazard: 1

PHYSICAL DATA:

Type of Dam: Earth Fill

Height of Dam: 17.5'

Normal Pool Storage Capacity: 48 AC-Ft

**ELEVATIONS:** 

Normal Pool: 1983.30

Pool at Inspection: 1983.4±

Tailwater at Inspection:

DAM OWNER:

Ebensburg Borough

**OPERATOR: Kelly Cook** 

ADDRESS:

300 West High Street

Ebensburg, PA 15931

Borough Manager Ebensburg Borough

PHONE: (814) 472-8780

FAX NO .:

E-MAIL ADDRESS: KCook@ebensburgpa.com

A completed and signed Dam Owners Notice Checklist is to accompany this Inspection Checklist.

PERSONS PRESENT AT INSPECTION:

Name

Jonah E. Salvards, P.E.

Tyler M. McGraw, P.E.

Title/Position

**Project Engineer** 

**Project Engineer** 

Representing

Stiffler, McGraw & Assoc.

Stiffler, McGraw & Assoc.

DATE OF INSPECTION:

10/10/2023

WEATHER:

Partly Cloudy

TEMPERATURE:

41°F



This is to certify that the above dam has been inspected and the

following are the results of this inspection.

Signature of Registered Professional Engineer

10-25-23

(P.E. Seal Required)

Date

NAME OF DAM: Ebensburg Storage Dam DEP DAM NO.: D11-061 DATE: 10/10/23						
ITEM	CONDITION	COMMENTS		Montor	IVESTIGATE	Repair
		EMBANKMENT: CREST				
1	Surface Cracking	None noted				
2	Sinkhole, Animal Burrow	None noted				
3	Low Area(s)	None noted			$\perp \square$	
4	Horizontal Alignment	No problems noted				Щ
5	Ruts and/or Puddles	None noted				
6	Vegetation Condition	Good cover of grass			$\perp$	Ш
7	Warning Signs	None Observed			14	Ш
8					14	
9						
	Tali	AID A BIEZRAEZBIEZ, TERCEPEZ A RAZA	- CT			
10		MBANKMENT: UPSTREAM FA	ICE			
10	Slide, Slough, Scarp Slope Protection	Concrete in good condition, to approximately spillway crest. Grass and weeds between conditions		t $\Box$		
12	Sinkhole, Animal Burrow	None noted				
13	EmbAbut. Contact	No problems noted				
14	Erosion	None noted			$\perp$	
15	Vegetation Condition	Good cover of grass, vegetation present, need	s cut		14	
16					14	Щ
17						Щ_
Add	itional Comments (Refer to ite	n number if applicable):				

NAM	IE OF DAM: Ebensburg Storage I	am DEP DAM NO.: D11-	061 DATE:	ATE: 10/10/23			
ITEM	CONDITION	COMMENTS		Monton	IVESTIGATE	REPAIR	
	EM	BANKMENT: DOWNSTREAM	FACE				
18	Wet Area(s) (No Flow)	None noted					
19	Seepage	None noted					
20	Slide, Slough, Scarp	None noted				H	
21	Emb Abut. Contact	No problems noted			Н	+	
22	Sinkhole, Animal Burrow	None noted		H	$\blacksquare$		
23	Erosion	None noted		Ш	H	$\forall$	
24	Unusual Movement	None noted		$\vdash$	H	-	
25	Vegetation Control	Good cover of grass		井	H	$\vdash$	
26 27				H	H	$\dashv$	
Add	itional Comments (Refer to ite						
	EM	BANKMENT: INSTRUMENTA	TION				
28	Piezometers/Observ. Wells	None noted				Ц	
29	Staff Gauge and Recorder	None noted	2 4 2 77 111	ш	Ш		
30	Weirs	Stream flow monitor installed November 19 Run Conservation Release Documentation	94 for Howell's				
31	Survey Monuments	None noted					
32	Drains	Not observed					
33	Low Flow Release	The low flow release from Howells Run Dar from a six-inch diameter pipe in the east side emergency spillway when there is little or no the spillway. The pipe was flowing during the	ewall onto the water running in	$\boxtimes$			
34	Frequency of Readings	The low flow release is continuously monito			П	П	
35	Location of Records	Water treatment facility data storage unit				Ħ	
36	Education of Italian			m		Ħ	
37							
Add	itional Comments (Refer to ite	n number if applicable):					

NAM	IE OF DAM: Ebensburg Storage l	Dam	DEP DAM NO.: D11-061	DATE:	10/10	/23			
ITEM	CONDITION	C	COMMENTS		Montor	IVESTIGATE	Repair		
	DOWNSTREAM AREA								
38	Abutment Leakage	None noted							
39	Foundation Seepage	*(See below)	1		$\boxtimes$				
40	Slide, Slough, Scarp	None noted							
41	Drainage System	None Observed					Щ		
42	Boils	None noted				Щ	Щ		
43	Wet Areas	None noted				Ш			
44	Reservoir Slopes	No problems noted							
45	Access Roads		m the downstream face by the						
43	Access Roads		oad. The access road is gated.						
46	Security Devices	The gate on the bridge to	the intake tower is locked		Ш				
47	Act 91 Run-of-the-River Signs or Bouys	N/A							
48									
49									
wetl wetl a res	area was approx. 2-3 GPM, ands adjacent to the Water 7	an increase from last year ( Treatment Plant Parking Ar off from the mountainside	m access road (see sketch plan). (approx 1 GPM). The wet area rea. It is difficult to determine we to the west of the dam. Regard	extende whether	ed to this v	a pat vet ai	ch of ea is		
	SPII	LWAYS: ERODA	BLE CHANNEL: N/A						
50	Slide, Slough, Scarp								
51	Erosion								
52	Vegetation Condition								
53	Debris								
54									
55									
Add	itional Comments (Refer to ite	m number if applicable):							

NAME OF DAM: Ebensburg Storage Dam DEP DAM NO.: D11-061 DATE: 10/10/23									
ITEM	CONDITION	COMMENTS	Montor	IVESTIGATE	REPAIR				
	SPII	LWAYS: NON-ERODABLE CHANNEL							
56	Sidewalls	Fair condition. *See Below							
57	Channel Floor	Some concrete surface erosion. *See Below							
58	Unusual Movement	Unusual movement of upper wall section addressed via removal of section experiencing movement. See Photos 13, 18							
59	Approach Area	No problems noted		Ш	Ш				
60	Weir or Control	Good condition	Щ	Ш	Щ				
61	Discharge Channel	No problems noted	14	Ц.	Щ				
62	Boils	None noted	Щ	Ц	Ц				
63			닏	$\blacksquare$	<u> </u>				
64			Ш	Ш					
56. 7 the t sectil by E In 20 wall locar simi	Additional Comments (Refer to item number if applicable):  56. The sidewalls exhibit sporadic hairline cracks with efflorescence throughout. There is advanced spalling on the top of the west sidewall at the upstream end of the spillway (Photo 8). The portion of the west side upper wall section which had experienced a major crack and been separating from the upstream spillway wall was removed by EMA operational staff in 2019. See Photos 13 and 17.  In 2022, a small hairline crack was noted on the lower wall section (see Photo 18) at the location where the upper wall section had been removed. Two additional hairline cracks were noted during this year's inspection at this location. The cracks should be monitored moving forward to ensure the lower wall section does not slide similarly to the upper wall section.  57. In 2019 concrete patching / repairs were performed at the lip of the downstream spillway, near the portion of								
me i	the removed upper wall section. See Photo 14								

NAM	E OF DAM: Ebensburg Storage I	Dam DEP DAM NO.: D11-061 DATE	E: 10/10/23			
ITEM	CONDITION	COMMENTS	Montor		IVESTIGATE	REPAIR
		SPILLWAYS: DROP INLET / N/A				
65	Intake Structure	N/A			]	
66	Trashrack	N/A				Ш
67	Stilling Basin	N/A	Щ			
68			14	<u> </u>	4	$\vdash$
69	itional Comments (Refer to ite					
		OUTLET WORKS				
70	Intake Structure	Replaced in 1994. The intake structure appears to be in good condition. "DANGER WATER INTAKE KEEP AWAY" signs installed on intake structure in 2021				
71	Trashrack	N/A				
72	Stilling Basin	N/A				Ц
73	Primary Closure	*See below				Ц
74	Secondary Closure	This valve is located in a manhole near the (See below)	14	11		Ц
75	Control Mechanism	Replaced in 1994		Ļ		ᆜ
76	Outlet Pipe	The outlet pipe was televised in 2016 and found (See below)		1	4	$\vdash$
77	Outlet Tower	N/A	+ -	1	4	H
78	Outlet Structure	N/A	ᆛH	+	4	井
79	Seepage	None noted	╁╫	+	╡╢	$\dashv$
80	Unusual Movement	None noted	+ $+$ $+$	╁	4	H
81			$+$ $\vdash$ $\vdash$	┼	╡┤	H
82	War and Comments on Carrie			11		Ш
73. cons	tructed atop the intake towe	" S.S. sluice gate was installed in early-2021. An access pla				also
	o be in satisfactory condition		- 3			

NAN	ME OF DAM: Ebensburg Storage l	Dam DEP DAM NO.: D11-061 DATE	: 10/10	)/23	
ITEM	CONDITION	COMMENTS	MONTOR	IVESTIGATE	Repair
	CONCRETI	E/MASONRY DAMS: UPSTREAM FACE N	/ <b>A</b>		
83	Surface Conditions	N/A			
84	Condition of Joints	N/A			
85	Unusual Movement	N/A			
86	Abutment-Dam Contacts	N/A			
87					Ш
88					
	CONCRETE/	MASONRY DAMS: DOWNSTREAM FACE	N/A		
89	Surface Conditions	N/A			
90	Condition of Joints	N/A			
91	Unusual Movement	N/A			
92	Abutment-Dam Contacts	N/A			
93	Drains	N/A	Ш	Щ	Ш
94	Leakage	N/A	Щ	Щ	Щ
95			H	H	H
96			Ш	Щ	Ш
Add	itional Comments (Refer to ite	m number if applicable):			

NAM	E OF DAM: Ebensburg Storage	DEP DAM NO.: D11-061 DAT	E: 10/10/23	
ITEM	CONDITION	COMMENTS	MONTOR	REPAIR
	CONC	RETE/MASONRY DAMS: CREST N/A		
97	Surface Conditions	N/A		
98	Horizontal Alignment	N/A		
99	Vertical Alignment	N/A		
100	Condition of Joints	N/A		
101	Unusual Movements	N/A		
102			<u> </u>	
103				
		RESERVOIR AREA		
104	Sedimentation	No problems noted		
105	Slope Stability	No problems noted		444
106	Sinkholes	No problems noted		44
107	Fractures	No problems noted		
108	Unwanted Growth	Brush along spillway approach channel needs cut	<del>-    -    -                            </del>	
109	Storage Gage	None observed		╡┼╞╡╴
110			<del></del>	+   -
111	1.2			
Add	itional Comments (Refer to i	tem number if applicable).		

NAM	E OF DAM: Ebensburg Storage D	am	DEP DAM NO.: D11-061	DATE:	10/10	/23	
ITEM	CONDITION		COMMENTS	NE)	Montor	IVESTIGATE	REPAIR
Fin	al Comments:						

# DAM OWNERS NOTICE CHECKLIST Department of Environmental Protection Bureau of Waterways Engineering Division of Dam Safety

**DEP DAM NO.: D11-061** Ebensburg Storage Dam NAME OF DAM: This is to certify that both the Downstream Hazard Description is accurate and the Posted Notice locations listed below have been inspected and the following are the results of these inspections. Signature of Dam Owner Name of Dam Owner This Dam Owners Notice Checklist is to accompany the Inspection Checklist filed by the Engineer. **EMERGENCY ACTION PLAN** Date of Last Update of Emergency Plan: | September 24, 2018 Downstream Hazard Description (Refer to sections II.C and II.D in the EAP), additionally, specify any new developments, structures, etc. downstream within the inundation area: The inundation area resulting from a sudden dam failure follows Howells Run southward to Jenks Dam immediately north of the Borough Swimming Pool, and then extends roughly along the eastern boundary of Ebensburg Borough to Lake Rowena. From Lake Rowena, the inundation area continues across and under SR 22, leaves the Borough and enters Cambria Township where it continues southward along Howells Run through primarily undeveloped woodland area for approximately 3.4 miles to the crossing of Wilmore Road then eastward through woodland area for approximately 1.6 miles where it joins the North Branch of the Little Conemaugh River. From that point the inundation area continues another 0.1 mile where it crosses Spinner Road and then follows the North Branch of the Little Conemaugh River southward through additional woodland area and flows into Wilmore Reservoir. Within the inundation area there are approximately 27 homes with an estimated 64 residents, and 12 commercial businesses and 12 public/recreational/institutional facilities with an approximate population of 265, for a combined total population of 329. The public/recreational/institutional facilities include: the Ebensburg Water Plant; Ebensburg Reservoir Trail; Ebensburg Swimming Pool; Lions Field; Lake Rowena Park; Ebensburg Lake Field; Ebensburg Tennis Center; Skills of Central PA; Lakeside Church of the Nazarene; Ebensburg Outdoor Hockey Rink; and the Ebensburg Wastewater Treatment Plant. POSTED NOTICES (Refer to section V.A in the EAP) DATE COMMENTS LOCATION INSPECTED **Ebensburg Water Plant** 1 Reservoir Trail (Trailhead) 2 **Ebensburg Swimming Pool** 3 Lions Field 4 clid not open this Frostbite Ice Cream and Treats 5

6

7

Festival Beverage

Dr. Archibald Morris Medical Office

8	Lakeview Lanes		닏	ᆜ	1
9	Ebensburg Oil and Gas			Ш	14
10	Lake Rowena Park				4
11	Ebensburg Lake Field				1
12	Ebensburg Tennis Center				
13	Traders Guide and Pennysaver				U
14	Mainline Newspaper				A
15	Skills of Central PA				U,
16	Lake Inn Motel				
17	Ebensburg Lakeside Community Church of Nazarene				Ø
18	Ebensburg Animal Hospital				
19	Ebensburg Outdoor Hockey Rink				U
20	Country Sisters Store				13
21	Foster F. Wineland Inc.				
22	Dunkin Donuts				13
23	Dodson Electric	1			12
24	Ebensburg Wastewater Treatment Plant				Ø
Additional Comn	nents (Refer to item number if applicable):				

### PHOTOGRAPHS 2023



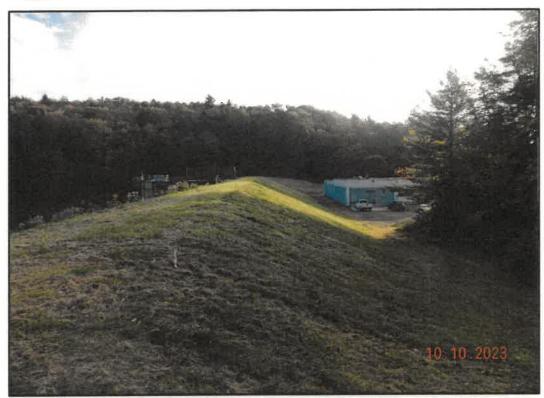


Photo 1: Downstream Embankment and Crest looking Northeast

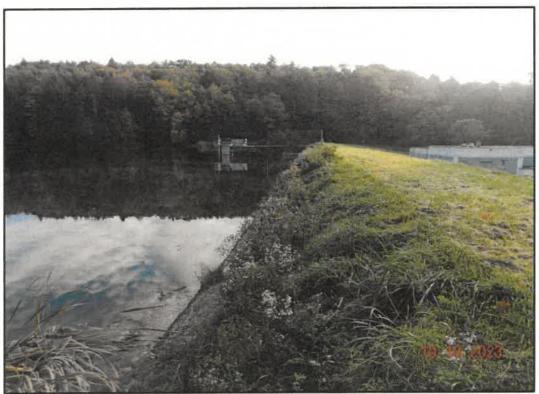


Photo 2: Upstream Embankment looking Northeast



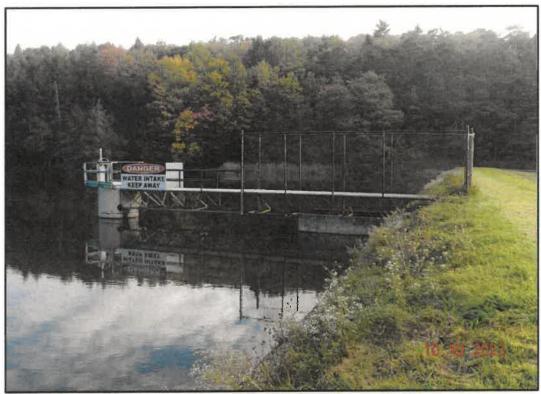


Photo 3: Upstream Embankment looking Northeast



Photo 4: Intake Structure, Bridge and Gated Access



### DEP Dam No. D11-061 Ebensburg Storage Dam - 2023 Inspection Ebensburg Borough, Cambria County, Pennsylvania

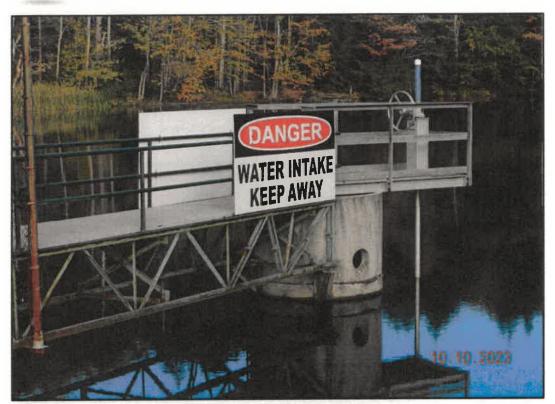


Photo 5: View of Intake Structure

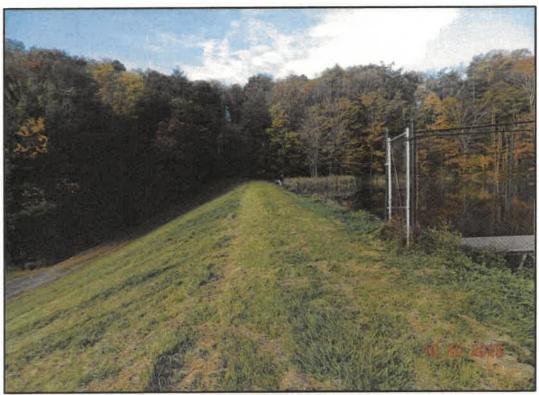


Photo 6: Crest from the Middle looking Southwest



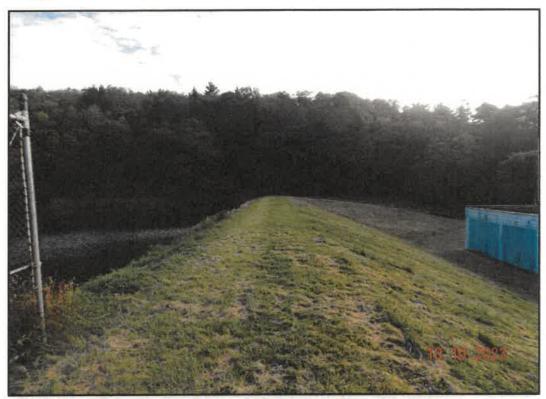


Photo 7: Crest from the Middle looking Northeast

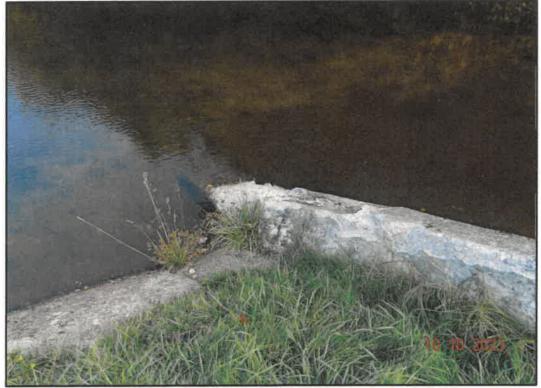


Photo 8: Spillway Control Section looking Northeast





Photo 9: Woody Vegetation at East Abutment

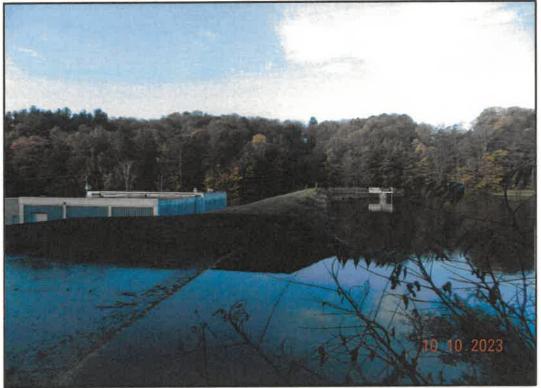


Photo 10: Spillway Entrance and Upstream Embankment looking Southwest





Photo 11: Downstream Section of Spillway



Photo 12: View of Weir on Discharge Channel Used for Measuring Conservation Release



Photo 13: Recently Removed Upper Section of the Western Spillway Wall (EMA operational staff removed portion of wall in 2019)



Photo 14: Portion of downstream spillway channel patched/repaired by EMA operational staff in 2019



#### DEP Dam No. D11-061 Ebensburg Storage Dam - 2023 Inspection Ebensburg Borough, Cambria County, Pennsylvania



Photo 15: View of Reservoir Drain Manhole



Photo 16: Newly installed primary closure drain valve operator and access platform. (20" Stainless Steel Sluice Gate)



DEP Dam No. D11-061 Ebensburg Storage Dam - 2023 Inspection Ebensburg Borough, Cambria County, Pennsylvania

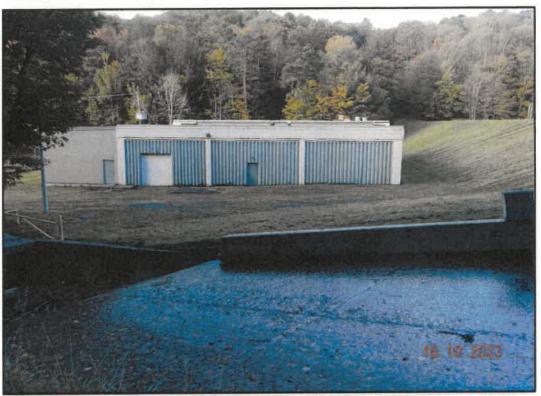
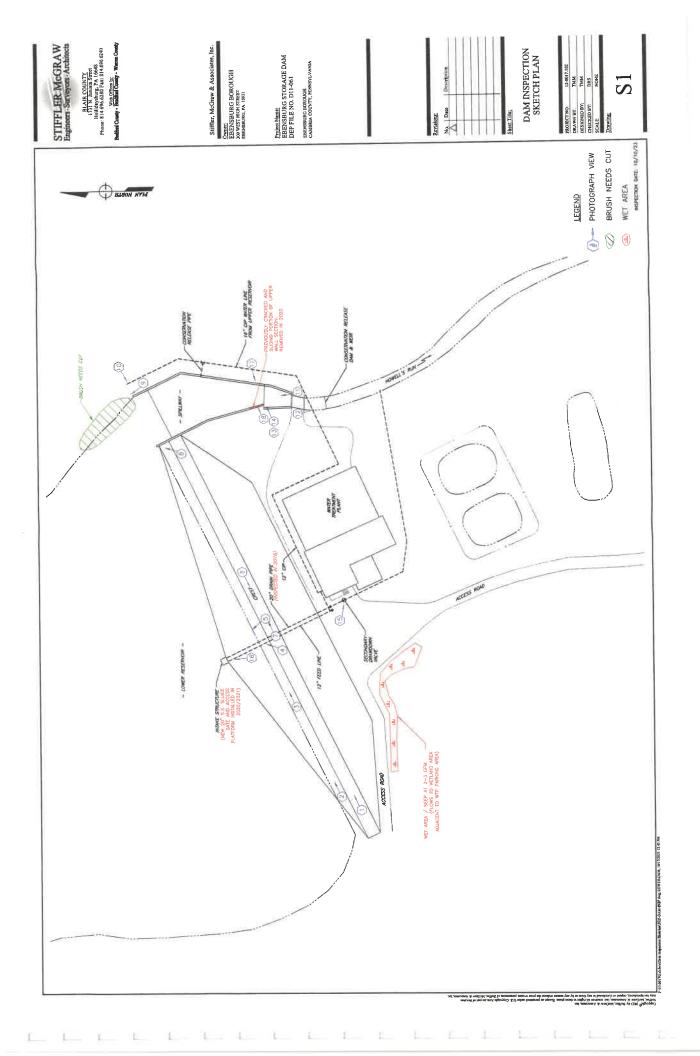


Photo 17: Recently Removed Upper Section of the Western Spillway Wall (EMA operational staff removed portion of wall in 2019)



Photo 18: Hairline Cracking in Western Spillway Wall

### SKETCH PLAN 2023



# DEP REVIEW LETTER FOR 2022 INSPECTION REPORT

\*(not received)